

Chemistry 1012
Spring 2004
Tues/Thurs 1:30-2:45

Instructor: Dr. Matthew Tarr
Office: CSB 344
Office Hours: Tues 3-4, Wed 11-12 or by appointment
Tel.: 280-6323
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Blackboard: 04SPR - Introductory Chemistry - SECTION 001
Grades, assignments, announcements, and supplementary material

Prerequisite: Eligibility for enrollment in Mathematics 1115 or 1125

Description: An introduction to basic chemistry concepts based on issues relevant to society. Intended for non-science majors, including education majors not specializing in science. Credit for both Chemistry 1012 and 1017 will not be allowed.

Credit: Students with majors in the College of Sciences receive **NO CREDIT** for this course. Pre-Nursing and Pre-Allied Health students **CANNOT** use this course for entry into Nursing and Allied Health programs.

Text: *Chemistry in Context*, 4th Edition, American Chemical Society
Visit the Online Learning Center at: www.mhhe.com/acs4

Student Learning Objectives

Students who complete this course should have a basic understanding of general chemistry principles and their relationship to our society, environment, natural resources, and health.

Attendance Policy

Attendance will be taken at the beginning of each class period. 5% of your final grade will be based on attendance.

Exam Schedule

Exam 1 - Feb. 19
Exam 3 - Apr. 13

Exam 2 - Mar. 18
Final Exam - Dec. 12

Grading

Course grades will be determined from exam grades, quizzes, homework assignments, class participation, a group project, and attendance. During the semester three exams* will be given. In addition to these exams, a **comprehensive** final exam will be given on May 12 from 12:30-2:30 PM. The final exam will consist of two sections: 1) a section on chapter 10-12 materials and 2) a course overview section. All exams are closed book and notes are not permitted.

Problems similar to assigned homework will appear on the exams; if you complete and understand the assigned homework, you should do well on the exams. In addition, topics covered during lectures will be emphasized on the exams. The key to success in this course is to read the text, attend class, do the homework problems, and then seek help on subjects you don't understand.

**No make up exams will be given except with written official verification of the following: serious illness or injury, death of an immediate family member. In such cases Dr. Tarr should be contacted before the exam.*
Course grades will be assigned based on the following table:

| | |
|---|-----|
| Exam 1 | 15% |
| Exam 2 | 15% |
| Exam 3 | 15% |
| Group Project | 10% |
| Final Exam | 30% |
| Attendance, Quizzes, Homework, and In-class Activities .. | 15% |

Laboratory Activities

Labs will be conducted in class as scheduled. Each student should provide his/her own safety glasses or goggles which **must** be worn at all times during labs. Safety goggles are available in the UNO bookstore. Appropriate clothing should be worn during labs (no shorts or open shoes). To prevent damage to clothing, a lab coat or apron may be worn. Lab safety guidelines will be provided to all students.

Disabilities

Students who qualify for services will receive the academic modifications for which they are legally entitled. It is the responsibility of the student to register with the Office of Disability Services (UC 260) each semester and follow their procedures for obtaining assistance.

Classroom Conduct

Cell phones should be turned OFF before entering class. Chronic tardiness will be penalized. Talking and other distracting behavior is not permitted during class. Asking questions and participating in class activities are encouraged.

Academic Integrity

Academic integrity is fundamental to the process of learning and evaluating academic performance. Academic dishonesty will not be tolerated. Academic dishonesty includes, but is not limited to, the following: cheating, plagiarism, tampering with academic records and examinations, falsifying identity, and being an accessory to acts of academic dishonesty. Refer to the UNO Judicial Code for further information, including the consequences for acts of academic dishonesty. The Code is available online at http://www.uno.edu/~stlf/policy%20Manual/judicial_code_pt2.htm.

**Free Tutoring Available On-Campus from the UNO Learning
Resource Center:**

www.uno.edu/~lrc/index.htm

CHEM 1012 Spring 2004 - Approximate Course Schedule

| Date | Chapter | Topic |
|------------------------------|-------------|---|
| Jan. 20, 22, 27 | 1 | Introduction; The Air We Breathe |
| Jan. 29, Feb. 3 | 2 | Protecting the Ozone Layer |
| Feb. 5, 10 | 3 | The Chemistry of Global Warming |
| Feb. 12, 17 | 4 | Energy, Chemistry, and Society |
| Feb. 19 | 1-3 | EXAM 1 |
| <i>Feb. 24</i> | | <i>No Class</i> |
| Feb. 26, Mar. 2 | 5 | The Water We Drink |
| Mar. 4, 9 | 6 | Neutralizing the Threat of Acid Rain |
| Mar. 11, 16 | 7 | The Fires of Nuclear Fission |
| Mar. 18 | 4-6 | EXAM 2 |
| Mar. 23, 25 | 8 | Energy From Electron Transfer |
| Mar. 30, Apr. 1 | 9 | The World of Plastics and Polymers |
| <i>Apr. 6, 8</i> | | <i>No Class</i> |
| Apr. 13 | 7-9 | EXAM 3 |
| Apr. 15, 20 | 10 | Manipulating Molecules and Designing Drugs |
| Apr. 22, 27 | 11 | Nutrition: Food for Thought |
| Apr. 29, May 4 | 12 | Genetic Engineering and the Chemistry of Heredity |
| May. 6 | | Group Projects |
| May 12, 12:30-2:30 PM | 1-12 | <u>COMPREHENSIVE</u> FINAL EXAM* |

*Final exam will consist of two sections: 1) a section on chapter 10-12 materials and 2) a course overview section.

CHEM 1012 Spring 2004 Homework

Homework is due at the **beginning** of class on the date indicated. One bonus question for each homework assignment can be turned in for extra credit on the corresponding exam (up to 2 points earned for each bonus question will be added directly to exam score). For example, if you scored 86% (a B) on Exam 1 and received full credit for one bonus question in chapter 1, one bonus question in chapter 2, and one bonus question in chapter 3, your adjusted exam score would be 92% (an A!).

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|-------------|---|---------------------------|----------|
| Chapter 1: | 1,2,4-6,9-11,15-17,19-21,25 | Bonus: 44, 45, or 46 | Due 1/27 |
| Chapter 2: | 2-7,9-15,20,22 | Bonus: 49 or 50 | Due 2/3 |
| Chapter 3: | 1,2,6,9,10,12,18,21,24,29,31 | Bonus: 45, 47, 48, or 49 | Due 2/10 |
| Chapter 4: | 1-6, 10, 11, 14, 15, 19, 22, 30, 37 | Bonus: 47, 48, 49, or 50 | Due 2/17 |
| Chapter 5: | 4-7, 11, 12, 17, 18, 19, 24, 29 | Bonus: 41-44, 50 | Due 3/2 |
| Chapter 6: | 1, 3, 4, 6-10, 15, 22 | Bonus: 45, 47, 49, 50 | Due 3/9 |
| Chapter 7: | 1-4, 10, 14-17, 20-26 | Bonus: 47, 48, 49, 50 | Due 3/16 |
| Chapter 8: | 1-3, 6, 13-16, 19, 21, 22, 24 | Bonus: 44, 45, 46 | Due 3/25 |
| Chapter 9: | 1-3, 5, 6, 8-10, 12, 13, 15, 17, 23, 24 | Bonus: 42, 43, 45, 47 | Due 4/1 |
| Chapter 10: | 1, 3-5, 6, 7, 9, 11, 13, 20, 21, 24 | Bonus: 39, 40, 44, 47 | Due 4/20 |
| Chapter 11: | 1-5, 9, 10, 12, 15-17, 20, 21, 25 | Bonus: 41, 44, 46, 47, 49 | Due 4/27 |
| Chapter 12: | 1, 3, 5, 6, 8, 10-13, 15, 18, 21 | Bonus: 41, 46, 48,49, 50 | Due 5/4 |

CHEM 1012 - Spring 2004
Tentative Lab Schedule

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|---------|-------------------|
| Jan. 22 | Matter and Change |
| Jan. 29 | Second Hand Smoke |
| Feb. 12 | Calorimetry |
| Mar. 2 | Foul Water |
| Mar. 11 | Radiation |
| Apr. 1 | Polymers |
| Apr. 20 | Esters |
| Apr. 27 | Food Calorimetry |